



**117P/217p**

**OWNER'S MANUAL**

# FEATURES

## 117p/217p FEATURES AND BENEFITS



### On-board Computer

Provides immediate feedback regarding your fitness progress—easy to read LCD displays time, heart rate, distance, odometer, speed, calories, calories per hour, workload, RPM, resistance level and two heartrate functions with the optional pulse receiver module.



### Fully Shrouded Eddy Current Brake

The 117p/217p bike features an eddy current brake for contact free resistance



### Seat

Extra-wide and extra-padded for maximum comfort



### Grip Heart Rate

Grasp both contact grips and check your current heart rate



### Belt Drive

The 117p/217p utilize a belt drive for extra smooth pedaling action



### Transport Wheels

A single individual can easily move and position the 117p/217p across any flat surface



### Serial Number

Located near the rear stabilizer

# INTRODUCTION

## CONGRATULATIONS!

Thank you for making the Schwinn 117p/217p bike a part of your exercise and fitness activities. For years to come, you'll be able to rely on Schwinn craftsmanship and durability as you pursue your personal fitness goals.

The 117p/217p bike should enable you to shape and monitor your workouts to:

▲ **Increase your energy level**

▲ **Increase cardiovascular and aerobic fitness**

▲ **Increase lower body muscle strength**

▼ **Decrease your overall percentage of body fat**

Whether you are just getting started in an exercise program or are already in good shape, the 117p/217p bike is designed to be an efficient, easy and fun way to achieve an enhanced level of fitness. You can exercise your way to a slimmer and healthier body. The on-board digital computer enables you to accurately monitor your progress by tracking time, distance, speed, odometer, calories, calories per hour, work load, and also RPM's. A heartrate and recovery function is available when the optional pulse receiver is installed. This module inserts into the port on the upper left-hand side of the computer unit and is available in either a telemetric chest strap or ear clip version. These modules can be purchased from an authorized Schwinn Fitness dealer.

This Owner's Manual contains all the information you need to operate and enjoy your 117p/217p bike. Also included are general fitness guidelines. Please read this Owner's Manual in its entirety before getting onto the 117p/217p bike and working out. So let's get started.

Take your time and have fun!

## TABLE OF CONTENTS

### Operation

How to use the 117p/217p bike .....	1
How to use the 117p/217p bike computer .....	3

### Maintenance

Moving your 117p/217p bike .....	7
Daily maintenance .....	7
Installing new computer batteries .....	7

### Guidelines – General Fitness and Exercise

Getting the most out of your home fitness program .....	8
The Stanford home exercise study .....	8

### Steps To Getting Started

Home fitness planning worksheet .....	9
Balance fitness .....	10
Muscular strength .....	11
Cardiovascular Fitness .....	11
Training effect .....	11

### Identifying Your Balanced Fitness Goals

Flexibility .....	12
Exercise and body composition .....	12
A balanced workout .....	13
Warm up .....	13
Aerobic/strength exercise .....	13
Cool down .....	14
How to determine your maximum heart rate .....	14
Target heart rate training zones .....	14
Beating the dropout odds: Jump start your fitness program .....	15
Summary of Surgeon General's Report on Physical Activity and Health .....	15
Make exercise a habit .....	16
It's never too late for fitness .....	17
Suggested readings .....	17

### Schwinn Fitness Inc. Limited Warranty

## FITNESS SAFEGUARDS

Before starting any exercise program, consult with your physician or health professional. He or she can help establish the exercise frequency, intensity (target heart rate zone) and time appropriate for your particular age and condition. If you have any pain or tightness in your chest, an irregular heartbeat, shortness of breath, feel faint or have any discomfort while you exercise, STOP! Consult your physician before continuing.

# OPERATION

## HOW TO USE THE 117P/217P BIKES

FIG.1



### ■ Seat adjustment

Proper seat adjustment helps ensure maximum exercise efficiency and comfort, while reducing the risk of injury.

1. Place one pedal in the forward position and center the ball of your foot over the center of the pedal. Your leg should be slightly bent at the knee (Figs. 1 and 2).
2. If your leg is too straight or your foot cannot touch the pedal, you will need to move the seat down on the 117p or forward on the 217p bike. If your leg is bent too much, you will need to move the seat up on the 117p or backward on the 217p bike.
3. Adjust the 117p seat by first dismounting the bike, then pulling out the adjustment knob on the seat tube and releasing the locking pin (Fig. 3). Lower or raise the seat to the desired height. Release the seat knob, engaging the locking pin. Be sure that the pin is fully secured in a seat post hole. To adjust the 217p seat, pull the seat lever up with your right hand to release the seat. Slide the seat forward or backward to the desired position. Then push the lever down and firmly lock in position.

FIG.2



FIG.3



### ■ Foot positioning/pedal strap adjustment

Place the ball of each foot on the pedals. Rotate the pedals until one foot is within arms reach. Then, reach down carefully and fasten the rubber strap over your shoe and secure it to the pedal by slipping the nub at the end of the pedal through one of the slots in the strap. Pull down the strap until it snaps into place (Fig. 4). Repeat for the other foot. Point your toes and knees directly forward to ensure maximum pedal efficiency. Pedal straps can be left in place for subsequent workouts.

FIG.4



### ■ Lower body workout

Once you are in position and sitting comfortably, slowly begin pedaling with your hands resting on the hand grips. Pedal at an easy pace and low resistance until you feel secure and comfortable. Then try experimenting with the range of resistance levels available using the controls on the computer console mast.

FIG.5



### ■ Resistance Control

Turning the resistance control clockwise (+) increases the level of resistance. Turning the resistance control counter-clockwise (-) reduces the level of resistance. Resistance adjustments can be easily made any time before, after or during your workout. (Fig. 5). **IMPORTANT:** Always turn the resistance control clockwise when the bike is not in use, so that the pedals will not turn freely and possibly cause injury.

### ■ Lower body workout

Once you are in position and sitting comfortably, slowly begin pedaling, with your arms relaxed at your sides and with your hands resting on the top of your thighs or on the hand grips. Pedal at an easy pace, at a low resistance level until you feel secure and comfortable. As you feel more comfortable, experiment with the range of resistance levels available via the micro-adjustment control.

## FITNESS SAFEGUARDS

Failure to follow any of these safeguards may result in injury or serious health problems.

- Do not place fingers or any other objects into moving parts of the exercise equipment.
- Keep children and pets away from the 117p/217p bike while machine is in use. A child's curiosity may result in injury. Do not allow children to use the 117p/217p bike bike. The pedal travel ranges are designed and intended for adults, not children.
- Never turn pedal crank arms by hand. To avoid entanglement and possible injury, do not expose hands or arms to the drive mechanism.
- Do not dismount the 117p/217p bike bike until the pedals are at a complete STOP.
- Warn bystanders to keep a safe distance. Do not allow anyone to touch the bike while it is in motion.
- After exercising, turn the resistance control clockwise to increase tension so the pedals will not rotate freely and possibly hurt someone.

# OPERATION



## HOW TO USE THE 117P/217P BIKE COMPUTER

3

## FUNCTIONS/FEATURES

The Schwinn 117p/217p computer features 12 different performance feedback functions that enable you to quickly and efficiently review your workout performance and progress. The large, easy-to-read, LCD display and full size buttons make reading the data display and operation easy, even at high levels of workout intensity.

The following outlines the many features incorporated into the 117p/217p computer:

### ■ TIME

The TIME feedback function is displayed automatically when pressing any of the display buttons or by simply beginning to pedal to turn the unit on. The TIME function can be customized to either count up from 0:00 to let you know how long you have been working out or the function can be programmed to count down from a specific user defined workout duration. In the Workout Count Down Mode, the TIME function can be adjusted in 1 minute increments ranging from 99:00 to 1:00. In this mode, the Rapid Advance feature enables you to quickly set the workout time by holding down the + or - button until the desired workout time is reached. The TIME function displays time in minutes and seconds.

### ■ DISTANCE

The DISTANCE feedback function is customizable to calculate distance in either Metric (Kilometers) or English (Miles) units of measurement. Either mode starts at 0 and continuously calculates the total distance accumulated during the workout.

### ■ ODOMETER

The ODOMETER feedback function is re-settable to enable you to track your cumulative workout mileage (or kilometers) throughout your pre-determined workout program. You can track your mileage (or kilometers) daily, weekly, monthly, etc. To reset the ODOMETER, when the computer is in the "ODOMETER", mode simultaneously press the (+) and (-) keys. This will set the function to zero.

### ■ CALORIES

The CALORIES feedback function calculates and displays the approximate total calories burned since the beginning of the current workout session.

### ■ CALORIES PER HOUR

The CALORIES PER HOUR feedback function calculates and displays the approximate number of calories you would burn in one hour at the current level of workout intensity.

### ■ WORK LOAD

The WORK LOAD feedback function displays the approximate power you have produced.

4

## FUNCTIONS/FEATURES

### ■ SPEED

The SPEED feedback function displays your current workout pace by calculating your approximate miles or kilometers per hour speed.

### ■ RPM

The RPM feedback function displays your current pedal speed in revolutions per minute. This feature enables you to monitor and maintain a certain cadence during various levels of workout intensity.

### ■ LEVEL

The LEVEL feedback function displays your current exercise resistance level. To customize your workout, the resistance level may be adjusted at anytime during your workout between the range of 1 (easiest) to 16 (hardest). To adjust the LEVEL of your workout, simply turn the resistance control knob until you reach your desired LEVEL. Turning the knob clockwise (+) increases the resistance and turning the knob counter-clockwise (-) reduces the resistance.

### ■ SCAN

This feature enables you to chose to view data in the TIME/DISTANCE, ODOMETER, CALORIES PER HOUR/WORKLOAD, and SPEED/RPM windows in a continuously changing display as it scrolls through each of the individual feedback functions. By selecting SCAN, the corresponding data in each window will be alternately displayed in 3 second increments.

### ■ \*HEART RATE

The HEART RATE feedback function displays your pulse per minute and is continuously updated. Grasp both stainless contact grips to view your current heart rate.

### ■ \*RECOVERY

The RECOVERY feedback function displays the drop in your heart rate in a 60-second period after the workout time has reached zero. At the end of your pre-set TIME in the Workout Count Down Mode, the computer will beep for 2 seconds. At this time stop pedaling and the computer will start the Heart Rate Recovery Routine. In this mode the computer will store the ending heart rate and display the current heart rate. After 1 minute has elapsed, the computer then reads the heart rate again and displays the difference between the heart rate at the end of the work out and the heart rate at the end of the 1 minute rest period. This number is displayed in the bottom LCD display. This measurement will help you monitor and evaluate how your level of fitness is improving with your exercise program. **\*The HEART RATE and RECOVERY functions** will only operate when the user is grasping both contact grips or the optional pulse receiver module is installed. This module inserts into the port on the upper left-hand side of the computer unit and is available in either a telemetric chest strap or ear clip version. These modules can be purchased from an authorized Schwinn Fitness dealer.

## OTHER FEATURES OF THE 117P/217P

When the computer is in the "OFF" mode, with no LCDs displayed, the QUICK START feature will activate and start the computer without having to input any other information. Simply press the START/ENTER key and you can begin to start working out immediately!

The 117p/217p computer requires four AA batteries, which are included with the unit. To save battery power, the computer has an automatic shutdown feature that turns the unit off if the unit is idle for 5 minutes. All stored values, except the last pre-programmed TIME, ODOMETER, and ENGLISH/METRIC units of measurement will be cleared.

### ■ INITIAL SET-UP

Before attempting Initial Set-up of the computer, please take a moment to familiarize yourself with the operation to ensure a quick and easy set-up.

Initial set-up of the 117p/217p computer is quick and easy and only takes a couple of seconds. First, install the included four AA batteries and then set the Distance Calibration in English (Miles) or Metric (Kilometers) units of measurement by pressing RESET. After pressing RESET, the display window will display all the LCD's for 3 seconds. While all the LCD's are illuminated, simultaneously press the up and down arrows and hold for 3 seconds. At this point only the Metric or English LCD's will light up. Alternate between these units by pressing either the up or down key. Choose your desired unit of measurement by pressing ENTER. The computer will then calculate distance in Miles or Kilometers. That's it! The computer is set up and ready to go.

### ■ GETTING STARTED

To activate the computer, press any key or begin to pedal.

The computer will display the TIME function at 0:00 or the last programmed time. When the computer is on, to set the TIME function to operate in the Workout Count Up Mode (workout time is displayed progressively from 0:00 until you decide to finish your workout), press the RESET and the START/ENTER buttons simultaneously. The TIME display will show 0:00. You can now begin your program.

To customize the TIME function to operate in Workout Count Down Mode (you set the desired workout time and then the computer counts down to 0:00), press RESET and the computer will display the last programmed time. To slowly change the Workout Count Down time, simply press the + or - key for each minute you want to increase or decrease your workout time and the display will show the corresponding time adjustment. To quickly reach your predetermined workout period, hold down the + or - key until you reach your desired workout time. When you have reached the desired workout time, press ENTER and you're now ready to begin exercising!



FIG. 6



FIG. 7



FIG. 8

## 117P/217P BIKE MAINTENANCE

### ■ Moving your 117p/217p bike

Carefully push the handlebars down to move and steer the 117p bike to another location (fig. 6). Carefully lift the horizontal rear floor support to move and steer the 217p bike to another location (fig. 7). Be gentle while moving the unit as any sharp impact directly or indirectly to the computer can affect computer operation.

### ■ Daily maintenance

Use a damp cloth to wipe your 117p/217p bike and computer free of sweat. **IMPORTANT:** To avoid damaging the finish on your 117p/217p bike and computer, never use a petroleum-based solvent when cleaning. Avoid getting excessive moisture on the computer.

### ■ Installing new computer batteries

Your 117p/217p bike comes complete with computer batteries. Signs that batteries need to be replaced include: fading LCD display; erratic function; or failure to turn on when the POWER button is pushed or when the pedals are put into motion. To install new batteries, follow these simple steps: 1. Remove the battery cover from the rear side of the computer. 2. Remove existing batteries and insert fresh AA batteries (Fig. 8).

## GENERAL FITNESS AND EXERCISE

Edmund R. Burke, Ph.D.

### ■ Getting the Most Out of Your Home Fitness Program

The three main reasons for the increased popularity of home fitness gyms and exercise are convenience, convenience and convenience. For any fitness program to be successful, it must be done on a regular, sustained basis. With equipment in your home, you can roll out of bed, put on a pair of sweats, and start working out while the coffee is brewing.

For many, home workouts are easier to fit into their hectic schedules. No getting in the car and having to go to the health club. No standing in line to use the stair climber. Then there is the comfort and safety factor. Who wants to run outdoors during a raging blizzard. Or, who wants to ride a bike on busy city streets during rush hour in the heat of summer. It's much more comfortable to hop on your Schwinn home fitness equipment and exercise in the comfort and security of your air-conditioned room.

Privacy and cleanliness are also important. Many feel intimidated in a gym, especially if they are carrying around a few extra pounds. At home you can exercise without feeling as if you are being rushed or that anyone is looking at you. No more lying down on a sweaty bench or wondering if you'll catch athlete's foot in the shower.

Flexibility of time may be the biggest advantage. Work schedules vary for many people who work flex shifts or have a family that has different schedules. Parents with children soon discover that exercising at home turns out to be the only viable alternative if they want to stay fit. But parents and busy workers may not be the only ones who benefit from exercising at home.

### ■ The Stanford Home Exercise Study

Recently, researchers at Stanford University School of Medicine, conducted a year long study of over 350 individuals to examine the effectiveness and compliance of a group of supervised home exercisers versus a group of individuals who reported for a group session at the university. The subject population included middle aged men and women and included fit individuals as well as individuals who were overweight and smoked.

Individuals in both the high intensity (three 40-minute sessions per week on the treadmill at a 73 to 88 percent of max heart rate) and low intensity group (five 30-minute sessions at 60-71 percent of max heart rate) reported significantly greater adherence than those in the university group based program.

Many at the beginning of the study thought that the university based group would have a greater compliance rate than the home based group, because of the camaraderie of the group and the instruction given by the instructors. But the study found the opposite to be true. The group program was just too inconvenient over the 12 month period for the subjects to justify the benefits.

But the good news was that all three groups showed fitness improvements. With the individuals in the low intensity group achieving similar results as the high intensity group. Good news for those of you just starting out in a moderate exercise program.

Perhaps most importantly, research has also shown that it's never too late to start exercising . . .and experiencing the benefits. Studies conducted at Tufts University, for instance, show that even people in their 90's can significantly increase their strength as a result of following a moderate, strength training program.

Exercise is one of life's joys. It energizes-it gives you a sense of well-being and accomplishment and it keeps you healthy and fit. There is great pleasure in being able to set goals, accept your own challenges and push yourself to a better life of health and fitness.

## STEPS TO GETTING STARTED

Once you have made the commitment to get started in a home fitness program, here are some suggestions that you may want consider to help you get off on the right foot and stay motivated. Realize that any new habit is difficult to establish at first, but it can be done. Follow these steps and you'll be on your way to establishing and using your home fitness center for improved health and fitness. Enjoy the journey!

- ✓ **Get a physical exam.** If you have been inactive for several years or new to an exercise program, be sure to consult with your family physician. Especially if you're over 35, have health problems or have a history of heart disease in your family.
- ✓ **Begin planning for your home fitness center.** Set aside a portion or a room in your house or apartment that is exclusively for fitness, and make sure that it is as comfortable as possible so you'll enjoy using it. If you like music or like to look outside while exercising, make sure these things are accessible. Do not force yourself to exercise in a part of the house that isn't comfortable, you will not feel motivated to exercise.
- ✓ **Do you need a companion?** If you prefer to exercise with someone, find a friend to train with who lives nearby. Encouraging your spouse or children to exercise with you is an excellent way to stay motivated and promote family unity.
- ✓ **Make fitness a part of your daily lifestyle.** Include it in your daily planner just as you would any other appointment. Keep the appointment; you'll be glad you did.
- ✓ **Use affirmations.** Affirmations will help you program your subconscious to accept new beliefs. They should be positive statements. "I am living a healthier lifestyle by exercising several times per week at home." Repeat your affirmations several times per week.

### ■ Home Fitness Planning Worksheet

Target date to begin exercise program: \_\_\_\_\_

Times of day I can exercise:

Time #1 \_\_\_\_\_

Time #2 \_\_\_\_\_

Time #3 \_\_\_\_\_

Days of the week that are good for me to workout:

Day #1 \_\_\_\_\_

Day #2 \_\_\_\_\_

Day #3 \_\_\_\_\_

Activities I would like to experiment with:

Activity #1 \_\_\_\_\_

Activity #2 \_\_\_\_\_

Activity #3 \_\_\_\_\_

Exercise goals I wish to accomplish:

Goal #1 \_\_\_\_\_

Goal #2 \_\_\_\_\_

Goal #3 \_\_\_\_\_

Individuals who will support me in my exercise program:

Person #1 \_\_\_\_\_

Person #2 \_\_\_\_\_

Person #3 \_\_\_\_\_

Individuals who can workout with me:

Person #1 \_\_\_\_\_

Person #2 \_\_\_\_\_

Person #3 \_\_\_\_\_

Over the last 25 years, ever since the introduction of Dr. Kenneth Cooper's book, Aerobics, many individuals have focused on walking, running, cycling, swimming, and other types of aerobic activity as their only means of exercise.

Unfortunately, this has led to many of these same people neglecting other key components of fitness; such as strength training, flexibility and body composition. Many of us lack the strength to carry a full back of groceries, or the flexibility to pick up our shoes without bending at the knees. In addition, as we have aged, we have replaced muscle tissue with fat tissue.

Continued work by Dr. Cooper at the Institute of Aerobics Research, is showing that in addition to the need to stress our cardiovascular system, that more attention needs to be placed on building stronger muscles and increasing joint flexibility. They are talking about the benefits of balanced fitness: regular physical activity that includes strength training and flexibility (stretching) in addition to aerobic conditioning.

For many years, "fitness" has been solely a measure of cardiovascular (aerobic) endurance. And, while aerobic fitness is the cornerstone for health and quality of life, there are two other components that are nearly as important. When developing your home fitness program it is only appropriate that you develop all three components in order to achieve balanced fitness, and thus optimal health and quality of life. The three components are:

- Muscle strength
- Cardiovascular fitness
- Flexibility

### ■ Balance Fitness

Many people considering beginning a balanced home fitness program still think "no pain, no gain." They usually think they have to cycle or lift weights until they are over-tired and their body aches. This idea of fitness is outdated. What they don't realize is that, in a short time using proper guidelines, the initial tiredness or soreness will be replaced by increased energy for work and recreation and an increased sense of well-being.

Since 1978, the American College of Sports Medicine (ACSM) has had an influence on the medical and scientific communities with its position statement on "The Recommended Quantity and Quality of Exercise for Developing and Maintaining Fitness in Healthy Adults." For the first time since 1978 the ACSM has revised its recommendations on exercise for healthy adults. The new paper published in 1991 expands and revises advice on cardiovascular fitness and body composition, and now recommends that you add resistance training. This is new information to those of us who have only cycled, ran, swam, watched our body weight and controlled our diet to attempt to maintain fitness.

Balanced fitness can do more to ensure a long, healthy life than just about anything else known to the medical community today. It's never too late to start a fitness program but ideally, you should build strong muscles, flexibility and a strong cardiovascular system early in life and enter the later years with your physical potential at its maximum.

## ■ Muscular Strength

The new guidelines have added resistance training since the ACSM recognizes the increasing importance of maintaining strength as a health benefit as we get older. The rationale for the addition of strength training to the guidelines is a result of a ten year follow-up study on master runners (along with other studies). Those who continued to train aerobically without upper body exercise maintained their body's oxygen transporting capacity over the years, but lost about 4.5 pounds of lean body mass; those who included strength training in their program maintained their lean body mass along with their aerobic capacity after 10 years of aging.

The guidelines also show where consistent resistance training helps maintain bone and muscle mass as we get older. For women, strength training (along with the aerobic work) may also protect against post menopausal bone loss and osteoporosis in their later years.

The guidelines recommend that two strength training sessions per week should be added to your workout schedule. We recommend three sessions a week during the off-season and two sessions a week for maintenance during the in-season. The new ACSM guidelines recommend one set of eight to 12 repetitions of eight to 10 strength exercises of your major muscle groups per session as the minimum requirement. A complete detailed strength training program will be outlined in a later section of this book. If weights or other resistance training devices are not available, add calisthenics to your program.

## ■ Cardiovascular Fitness

The new statement, published in 1991, repeats the four recommendations on duration, intensity, frequency and various modes of aerobic activity, with slight changes. The duration is now 20 to 60 minutes, versus a minimum of 15 minutes in the past.

Intensity of exercise can be determined by two methods. The first is the familiar use of target heart rate. The guidelines state that you should aim to work at 60 to 85 percent of your maximum heart rate (max HR = 220 - your age) or 50 to 85 percent of your maximal oxygen capacity (determined by doing a stress test on a bicycle ergometer or treadmill at a medical facility).

Duration is dependent upon the intensity of the activity; for those who like to work at a lower intensity they should work out longer. Low to moderate intensity cycling, stepping, walking, or cross-country skiing is best for most adults, because higher intensity workouts can lead to increased risk of injury and it is easier to adhere to the exercise routine. Beginners can achieve a significant training effect from low intensity workouts. If you're already fit and want to improve, gradually increase your intensity.

The type of activity, once again, should include anything that uses large muscle groups, and is rhythmical and aerobic in nature, such as cycling or running. Other activities could include stair climbing, cross-country skiing, walking, etc. These activities need to be carried out three to five days per week.

## ■ Training Effect

Duration, intensity and frequency of training stimulate the aerobic training effect. Any training done below the ACSM guidelines will not be sufficient enough to give you the aerobic training effect. If you are exercising more than the recommendations, it will not significantly increase the aerobic training effect, though athletes training for competition need to exercise more to be competitive. It is important to remember not to over do it; your body needs adequate recovery from a hard workout.

In general, endurance training for fewer than two days per week at less than 60 percent of maximal heart rate, for fewer than 20 minutes per day, and without a well-rounded resistance and flexibility program is inadequate for developing and maintaining fitness in healthy adults. It is just that simple.

## IDENTIFYING YOUR BALANCED FITNESS GOALS

Keep in mind that the ACSM recommendations are guidelines for the average person, not a champion athlete training for the Olympic Games. An appropriate warm-up and cool-down, which would also include flexibility exercises, is also recommended. While many of you will need to train with more mileage and at a greater intensity to race competitively, the important factor to remember for most people is that if they follow the ACSM guidelines of physical activity they will attain increased physical and health benefits at the lowest risk. Below is a table outlining the guidelines (Table 1.1).

The ACSM guidelines, if followed, can result in permanent lifestyle changes for most individuals. The good news is that, with the right approach, exercising at home can and should be pleasant. You can combine strength training, aerobic exercise and flexibility activities that you enjoy and gain valuable health benefits.

	Strength Training	Aerobic Exercise	Stretching
<b>Frequency</b>	2 to 3 times/week	3 to 5 times/week	3 to 6 times/week
<b>Intensity</b>	8-12 reps	60-90% of "easy" feeling until fatigue	max HR
<b>Stretch Time</b>	20-40 minutes	20-60 minutes	10 minutes
<b>Type</b>	10 exercises	any rhythmical activity	10 stretches

## ■ Flexibility

To be in total balance it is important to be flexible. While not part of the ACSM guidelines, flexibility is important for you to perform tasks that require reaching, twisting and turning your body. Hip flexibility, for example, is important to preventing lower back pain.

## ■ Exercise and Body Composition

Body composition is an important component of health-related fitness. Good body composition results from aerobic activity, strength training and proper diet.

Your everyday caloric balance will determine whether you will gain or lose weight from day-to-day. Caloric balance refers to the difference between the calories you take in from food eaten and caloric expenditure or the amount of energy you put out in daily activities, work or exercise.

Body weight is lost when caloric expenditure exceeds caloric intake or when caloric intake is less than caloric expenditure. It is a known physiological fact that one pound of fat is equal to 3500 calories of energy. Though it is predictable that shifts in caloric balance will be accompanied by changes in body weight, how your body loses weight varies on the various programs you may undertake to lose weight. For example, low calorie diets cause a substantial loss of water and lean body tissue, such as muscle. In contrast, an exercise-induced negative caloric balance results in a weight loss of primarily fat stores. If you were to add a resistant training component to your program, you may also see a slight increase in weight due to a gain in muscle mass, while an aerobic based program usually results in a maintenance of muscle mass. While both approaches to weight loss are effective, aerobic activity is found to be very effective because metabolism stays sustained for longer periods of time and energy. Expenditure is greater with activities that use large muscle groups such as walking, cycling, cross-country skiing, etc.

Follow these guidelines when engaging in a weight loss program that combines exercise and caloric restriction:

- Ensure that you are consuming at least 1,200 calories per day in a balanced diet. You need to consume calories for everyday bodily, healthy functions.
- You should not exceed more than a 500 to 1,000 calories per day negative caloric balance, combining both caloric restriction and exercise. This will result in a gradual weight loss, without a loss of lean body weight (muscle).

You should not lose more than 2 pounds per week on a diet.

- Include an exercise program that provides as least 300 calories or more of activity per day. This is best accomplished with exercise of low intensity and long duration. Many pieces of home fitness equipment give estimates of calories burned while exercising. Remember these are approximate calories burned, exact amounts will depend on type of exercise, your body size, intensity and duration.
- Add resistance training to your program to add muscle mass. Muscle cells are more active than fat cells and will help you burn more calories per day.
- Include use of behavior modification techniques to identify and eliminate bad diet and eating habits.

You should strive to burn between 300 to 500 calories per exercise session and 1000 to 2000 calories per week in exercise. Remember that sustained aerobic activities that use large muscle groups will cause the greatest energy expenditure.

If overweight or obese, you may want to keep the intensity even lower than 60 percent of maximum heart rate to keep the risk of orthopedic injuries at a minimum. Nonweight-bearing activities such as stationary cycling may be considered for this group, or for those who suffer from orthopedic or arthritis problems.

### ■ A Balanced Workout

All of your balanced home workouts should include three parts:

- Warm-up
- The main aerobic and/or strength routine
- Cool-down

Together, exercise and recovery comprise fitness conditioning: deny either and you invite injury and minimize benefits. Our bodies and minds become stronger and more efficient in response to their use and exercise. Overuse and overload will cause breakdown. You don't want too much, but just enough.

The secret is to know when you are pushing too much or too little. Monitoring your heart rate tells you how much to exercise and when to rest.

### ■ Warm-up

A good warm-up will help you perform better and will decrease the aches and pains most people experience. The warm-up prepares your muscles for exercise and allows your oxygen supply to ready itself for what's to come. Studies show that muscles perform best when they're warmer than normal body temperatures. Warm-up exercises include cycling, walking, skiing slowly until you begin to break a light sweat. This normally takes about 5 to 10 minutes. If using a heart rate monitor, raise your heart rate to about 110 to 120 beats per minute during your warm-up.

Stretching before and after exercise also serves many purposes. By promoting flexibility, it decreases the risk of injury and soreness. It also enhances physical performance by allowing you to maintain a comfortable position on the bicycle longer. Take a few minutes to stretch your legs, shoulders and lower back before you get on your home equipment.

### ■ Aerobic/Strength Exercise

Vigorous aerobic exercise is the core of your workout program. The intensity of your exercise must be strenuous enough to raise your heart rate into your target zone. This is usually between 60 and 90% of your maximum heart rate. Cycling, or any exercise done in this range, is usually called aerobic exercise. It means your body, your heart, and the various exercising muscles are working at a level at which oxygen can be utilized. Exercising with a heart

rate monitor allows you to constantly receive visible feedback (and on some models audible feedback) as to what your heart rate is while exercising, and allows you to stay within your selected target heart rate zone.

In addition to aerobic exercise, the ACSM recommends that healthy adults perform a minimum of 8 to 10 strength exercises involving the major muscle groups a minimum of two times per week. At least one set of 8 to 12 repetitions to near-fatigue should be completed during each session. These recommendations are based on two factors:

- Most people aren't likely to adhere to workout sessions that last more than 60 minutes. The regimen outlined above can be completed in 30 minutes or less, and when combined with 30 minutes of aerobic activity and flexibility gives you a balanced workout.
- While more frequent and intense training is likely to build greater strength, the difference is usually very small.

### ■ Cool-Down

The cool-down enables your body's cardiovascular system to gradually return to normal, preferably over a 5 to 10 minute period. Bringing your workout to an abrupt halt can cause light-headedness, since blood will pool in your legs if you abruptly stop working. Lower your exercise intensity gradually over a period of a few minutes. When your heart rate has returned to below 110 beats per minute you can stop exercising on whatever piece of equipment you are on.

Always keep in mind that warm-up and cool-down are just as important as the activity phase. Both can prevent many common injuries from occurring.

### ■ How To Determine Your Maximum Heart Rate

The best way to determine your maximal heart rate is to calculate your target heart rate zones. Simply record your heart rate several times when you are putting out a maximal effort, such as when you are going all out on a stationary bicycle, or during a hard session of stair climbing.

The easiest option is to estimate your maximum heart rate based on a formula which has been well-established for reliability: take the number 220, and subtract your age. For example, a 45 year old would have an estimated maximum heart rate of 175 ( $220 - 45 = 175$ ). The target heart rate zone for aerobic training would be 105 to 149 beats per minute (60 to 80 percent of the maximum).

### ■ Target Heart Rate Training Zones

There are three primary heart rate training zones. The first is often referred to as the "fat burning zone", because the intensity is moderate enough to require your body to primarily use fat as the fuel source for the exercise. You should exercise at 50 to 65 % of your maximal heart rate to achieve this level of intensity. While you workout in this and the other zones, your heart rate should fall somewhere between these two figures. People just starting out on an exercise program or who want to lose weight should concentrate on maintaining their heart rate in this zone for 20 to 30 minutes per day, 3 to 5 days per week.

The second zone discussed above is known as the "aerobic exercise zone" or is shown on many charts as the "target heart rate zone." In this zone you should exercise at 60 to 85% of your maximal heart rate. Training in this zone helps you build aerobic endurance and constructs a base upon which you can progressively add more demanding workouts as your cardiovascular fitness increases.

A higher level of training can help increase both your speed and tolerance for the buildup of lactic acid, the primary waste product of anaerobic metabolism in your muscles. This type of workout from 85 to 100% of maximum heart rate usually consists of short, hard sprints or repeated hill

running and is referred to as "anaerobic training."

Varied training in all three of these zones will add to increased levels of fitness and improved performance and add more energy to your life. "Most training programs use a combination of training intensities to increase performance capacity," according to J. T. Kearney, Ph.D., Senior Exercise Physiologist at the U. S. Olympic Training Center in Colorado Springs. Kearney suggests that it is important for individuals to monitor intensity. "There are many different ways to monitor training but monitoring heart rate response is the simplest, most convenient and least expensive physiological method for monitoring training," Kearney says.

### ■ Predicted Target Heart Rate Zones for Different Ages

Age	Maximum Predicted Heart Rate	Aerobic Target Zone: 60-85 %
20	200	120-170
25	195	117-166
30	190	114-162
35	185	111-157
40	180	108-153
45	175	105-149
50	170	102-145
55	165	99-140
60	160	96-136

After several weeks of "aerobic conditioning," certain changes become apparent. What was a barely attainable level of exercise before, now becomes quite easy. Whereas cycling or running at a certain pace or speed may have previously caused your heart rate to go up to 135 beats per minute, that pace can now be achieved at a lower heart rate. In short, your heart is becoming stronger, larger and more efficient, and your body is able to do the same work with less strain.

Regardless of your maximum average heart rate or your target heart rate, you should consult with your physician or with a sports medical expert to establish, with precision, the rates that are right for you, your age and your medical and physical condition. This is especially important if you are over the age of 35, been sedentary for several years, overweight or have a history of heart disease in your family.

### ■ Beating The Dropout Odds: Jump Start Your Fitness Program

You already know you need to exercise. And you're probably trying – at least a little. But let's get serious: If you don't add regular exercise to your life, you're missing out on a sure bet. This is one area where medical research all points in the same direction.

"Starting to exercise is comparable, from a health benefit standpoint, to quitting smoking," says the recently released Surgeon's General Report on Physical Activity and Health.

### ■ Summary of Surgeon General's Report on Physical Activity and Health:

- Regular physical activity offers substantial improvements in health and well-being for the majority of Americans.
- If you exercise regularly, the reports show, you'll reduce your risk of heart attack, cancer, diabetes, high blood pressure, osteoporosis, and even the common cold.
- Regular exercise, regardless of the intensity, can help you control stress, sleep problems, and depression.

But even with all this evidence, only 22 percent of Americans engage in exercise for 20 minutes a day. And even among individuals who begin exercise programs, the dropout rate is about 50 percent. So if the Surgeon General's findings are not convincing evidence enough to keep most us exercising on a consistent basis, what is?

Scientists are finding that the process of beginning, increasing and ultimately sticking to an exercise program is a combination of two elements: finding the right incentives and building a habit. And, as we will see, these two motivational factors are connected, but distinct.

Focusing on the positive is one of the best incentives to exercise. Avoid looking at exercise as a way to fix something that's wrong with your body. Instead, focus on your successes. Pat yourself on the back each time you've made it through a workout. Thrive on the energy that exercising gives you. Reward yourself with a dinner out, after you have reached a certain weight loss goal, or buy yourself a new workout outfit. With these rewards, you'll go back for more, and your body will show results.

Don't view exercise as punishment. Don't look at exercise as something that has to be tackled because you are out of shape. Think of exercise as an investment in your health, your physical looks and your mental outlook. As you run, walk or lift weights, concentrate on the positive energy being generated within your body and the renewed sense of life and wellness you feel.

The basics of any fitness program are planning and setting goals. Goal setting and formulating a plan are the most clear ways of establishing a consistent program of exercise; they are also a powerful form of direction and motivation. Take some time to think about what will help you begin your exercise program. Write these down in your daily planner or diary. Goals provide a sense of purpose and incentive that can drive you to your intended destination. However, for goals to be effective they need to be realistic. Motivation will be strengthened only if it's possible to reach your objectives.

Consider this: Your mind and body will respond better to exercise if you start with 20-minute sessions, three times a week, rather than an hour session four times per week. Once the sessions become a routine, aim for 30 minutes, then increase from there.

The most important thing in any exercise program is to do your best to keep progressing, backsiding as little as possible and getting back on the horse just as fast as possible if you fall off. Try to anticipate lapses: If a crazy workday looms, get up early and squeeze in a short ride on a stationary bicycle so that you've achieved something even if it isn't your regular workout routine. When on a business trip, stay in a hotel that has an onsite workout facility.

Exercise is one of life's joys. It energizes – giving you a sense of well-being and accomplishment and keeps you healthy and fit. There is great pleasure in being able to set goals, accept challenges, and push yourself to a better lifestyle of health and fitness. No matter what your reason for exercising – to lose weight, to get fit, or to feel better -- motivating yourself to exercise on a regular basis requires changing your behavior.

### ■ Make Exercise A Habit

The key to a successful fitness program is getting your body to do what your mind knows it should. Here are six mental strategies to help keep you focused on your fitness goals.

1. Clarify why you want to exercise. If you want to gain strength – is it to swim more laps, or to tone-up your body. By understanding and detailing your goals, you will be better able to stay motivated.
2. Vary your workout. To make your routine more enjoyable, vary it once in a while. Supplement your indoor cycling with outdoor cycling and strength training. These activities make exercise more interesting and increase your fitness level by making you utilize different muscle groups.
3. Focus on the positive. Avoid looking at your exercise program as a way

to fix something that's wrong with your body. Instead focus on your successes. Congratulate yourself after each workout. Thrive on the energy that exercising gives you.

4. Develop a constructive attitude. Do not focus on what you are giving up to exercise on a regular basis, but on what new options you'll have after you become fit.
5. Engage your body and mind. Connect on a deeper level, you'll be more likely to stay with your routine. If your exercise time on a stationary bike is your 30-minutes away from work or a time for reflection, you're much more likely to stick with it. Individuals claim to experience an increased sense of creativity and an enhanced thought process due to a regular exercise program.
6. Consider many of the physiological benefits. If a strong and fit body isn't enough to keep you motivated, consider some of the hidden benefits of exercise: lower blood pressure, stronger heart, more efficient pulmonary system, lower risk of osteoporosis and stress reduction.

### ■ It's Never Too Late . . . for Fitness

Most of us have very busy schedules and to keep our fitness level intact we have to be extremely efficient. These three words, efficiency of effort, form the core of creating your own home fitness center. Efficiency of effort means producing maximum gains with minimal time spent; this is the goal of most of us when designing our home fitness program.

The bottom line is you must be creative and innovative to get the best results. With this book and your own creativity a great workout is only a few moments away; a different grip on the multi-gym, a varied stepping rhythm on the stepper, a new intensity on the stationary wind-load simulator or a more rapid stroke rate on the rower. By varying your workouts you'll create maximum gains in the shortest time frames.

As you will see, your home fitness equipment will allow you to reach your fitness goals and prepare properly for a healthier lifestyle. Anyone who is serious about fitness – or for that matter just improving their overall fitness – should have a few basic pieces of home fitness equipment. It makes no difference if you are a competitive cyclist or triathlete, an executive or someone trying to tone their muscles, the home fitness center is the most efficient way to help you reach your physical potential.

Edmund R. Burke, Ph.D., is author of the *Complete Home Fitness Handbook*, published by Human Kinetics Publishers. It can be found at major book stores or you can order it by calling 1-800-747-4457. He also serves as Director of the Exercise Science Program at the University of Colorado at Colorado Springs.

### ■ Suggested Readings:

Burke, Edmund. *Complete Home Fitness Handbook*, Champaign, IL., Human Kinetics Publishers, 1996. Book illustrates how to set up a home gym, purchase equipment and gives workout programs for various pieces of home fitness equipment.

Anderson, Bob; Pearl Bill; and Burke Ed. *Getting in Shape: Workout Programs for Men & Women*. Bolinas, CA., Shelter Publications, 1994. Offers information on how to set-up a balanced fitness program of cardiovascular, strength and flexibility training.

Burke, Edmund. *Precision Heart Rate Training*. Champaign, IL., Human Kinetics Publishers, 1998. Fine-tune your workout intensity. This book fully explains why and how to train with a heart rate monitor.

## SCHWINN FITNESS INC. LIMITED WARRANTY FOR EXERCISE PRODUCTS

All Schwinn exercise products are warranted to the retail purchaser to be free from defects in materials and workmanship.

Warranty coverage valid to the original purchaser only and proof of purchase will be required. Any product sold or placed in an application not recommended by Schwinn Fitness will void any warranty coverage set forth by Schwinn Fitness warranty policies and procedures.

### TIME PERIOD

Residential Environment: 30 years on frame. Parts are covered for 3 years. Electronics are covered for two years. Labor is covered for one year from date of original purchase.

This warranty excludes wear items that need to be replaced due to normal wear and tear.

### THIS WARRANTY DOES NOT COVER

1. Any component on original equipment which carries a separate consumer warranty of the parts supplier.
2. Normal wear and tear.
3. Any damage, failure or loss caused by accident, misuse, neglect, abuse, improper assembly, improper maintenance, or failure to follow instructions or warnings in Owner's Manual.
4. Use of products in a manner or environment for which they were not designed.

### LIMITATIONS

The foregoing warranties are in lieu of and exclude all other warranties not expressly set forth herein, whether express or implied by operation of law or otherwise, including, but not limited to, warranties of merchantability or fitness for a particular purpose. Schwinn shall in no event be liable for incidental or consequential losses, damages or expenses in connection with its exercise products. Schwinn's liability hereunder is expressly limited to the replacement of goods not complying with this warranty or, at Schwinn's election, to the repayment of an amount

of the purchase price of the exercise product in question. Some states do not permit the exclusion or limitation of implied warranties or incidental or consequential damages, so the preceding limitations and exclusions may not apply to you.

### PROCEDURES

Warranty service will be performed by Schwinn or an authorized Schwinn Fitness Dealer. The original purchaser must provide proof of purchase. Service calls and/or transportation to and from the Authorized Schwinn Dealer is the responsibility of the purchaser.

1. Schwinn will have the option to repair or replace any exercise product(s), which require warranty service.
2. Schwinn will replace any equipment frame that is structurally defective with a new frame or replace the unit with a unit of equal value. Schwinn is not responsible for labor charges in replacing defective frames.
3. In the event a product cannot be repaired, Schwinn will apply a limited credit reimbursement toward another Schwinn exercise product of equal or greater value.
4. Schwinn is not responsible for dealer labor charges for component changeovers completed after the labor-related warranty period(s) stated herein.
5. If you elect to repair an exercise product or part yourself, using the services of someone other than an Authorized Schwinn Fitness Dealer, or use a replacement part not supplied by Schwinn, Schwinn shall not be liable for any cost, damage, failure or loss caused by the use of such unauthorized service or parts.
6. See your Authorized Schwinn Fitness Dealer for service or write to: Technical Services Department Schwinn Fitness Inc. 1886 Prairie Way Louisville, CO 80027



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